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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/633,710	08/05/2003	Kouichiro Ninomiya	Q76859	6766
23373	7590	12/20/2004	EXAMINER	
SUGHRUE MION, PLLC 2100 PENNSYLVANIA AVENUE, N.W. SUITE 800 WASHINGTON, DC 20037			HO, HOAI V	
			ART UNIT	PAPER NUMBER
			2818	

DATE MAILED: 12/20/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/633,710

Applicant(s)

NINOMIYA ET AL.

Examiner

Hoai V. Ho

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 January 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) 6-8 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05 August 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

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1. This office acknowledges receipt of the following items from the Applicant:
Papers submitted under 35 U.S.C. 119(a)-(d) have been placed of record in the file.
2. Claims 1-5 are presented for examination.

Election/Restriction

3. Applicant's election of Species I, claims 1-5 (instead of 1-15 as shown in response) filed on Nov. 8, 2004 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)). Claims 6-8 are withdrawn from further consideration.

Specification

Title

4. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Khang et al. U. S. Patent No. 6111808 in view of Sugio U. S. Patent No. 5602796.

Per claims 1-4, Figures 1 and 2a of Khang are directed to a semiconductor memory device comprising: subword drivers (SWDs), each of which has a plurality of subword driver circuits commonly connected to a main word line (GWLb) to drive respective subword lines (SWLs), each of the SWDs being connected to driver input terminals (SWL, SWLb and SWLE) and the subword lines; and a common inverter circuit (fig. 3, GWLb complement of GWL through an inverter, generally comprising by two transistors [claim 4] in a row decoder 2, not shown, OR 41-1 in fig. 1 of Sugio) having an inverter input terminal (GWLb) and an inverter output terminal (GWL), the inverter input terminal being connected to the main word line and the inverter output terminal being connected to the plurality of driver input terminals, wherein each of the subword driver circuits includes an internal inverter circuit (P20 and N22) that is connected to an inverter output terminal (SWL) connected to the main word line and the subword selection lines and has its output terminal connected to the subword lines, and a drive transistor (N21) connected to the subword selection lines, the inverter output terminal and the output terminal of the internal inverter circuit.

Figure 1 of Khang discloses a common subword selection signal (SWLE) connect to all the subword driver circuits instead of each of the subword driver circuits is driven by a subword selection signal received through one of the subword selection lines as the claimed invention.

However, this limitation was well known in the art at the time the invention was made. For example, Fig. 1 or 2 of Sugio disclose each (50-1-1) of the subword driver circuits (50-1-1 to 50-1-m) is driven by a subword selection signal (PW1, a word line activation signal) received through one of the subword selection lines (PW1 to PWm, col. 2, lines 26-28). It would have been obvious to a person of ordinary skill in the art at the time invention was made to modify

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Khang' subword drivers which utilizes each of the subword driver circuits is driven by a subword selection signal received through one of the subword selection lines as taught by Sugio. Because Sugio suggests that the word line activation signal or subword selection signal can be reliably sent to a desired word line alone. Thus, the read and write operations can be stable performed (col. 5, lines 50-52).

As per claim 5, Fig. 1 of Khang discloses wherein the common inverter circuit (GWL0) and the main word line (GWL0) and are shared by four subword driver circuits (the first two rows of SWDs).

7. The prior art made of record and not relied upon is considered pertinent to applicants' disclosure. Matsumoto et al. (USP 6721223) and Oh (USP 6011746) disclose a word line driver for a semiconductor memory device.

8. When responding to the office action, Applicants are advised to provide the examiner with the line numbers and page numbers in the application and/or references cited to assist the examiner to locate the appropriate paragraphs.

9. A shortened statutory period for response to this action is set to expire 3 (three) months and 0 (zero) day from the date of this letter. Failure to respond within the period for response will cause the application to become abandoned (see MPEP 710.02 (b)).

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hoai V. Ho whose telephone number is (571) 272-1777. The examiner can normally be reached on 7:00 AM -- 5:30 PM from Monday through Thursday.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Nelms can be reached on (571) 272-1787. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



hvh
December 7, 2004



Hoai V. Ho
Primary Examiner
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